

Appl. No. 10/799,248
Atty. Docket No. 9194
Amdt. dated June 5, 2006
Reply to Office Action of April 4, 2006
Customer No. 27752

REMARKS

Claim Status

Claims 1-6 are pending in the present application. No additional claims fee is believed to be due.

Rejection Under 35 USC §103(a) Over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178)

Claims 1, 2 and 5 have been rejected under 35 USC §103(a) as being unpatentable over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178). This rejection is traversed. Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness. Pozniak in view of Yang does not teach or suggest all of the claim limitations of Claims 1, 2 or 5. Furthermore, there is no motivation to modify Pozniak by the teachings of Yang.

Applicants disclose a method for making a forming structure. The method comprises providing a metal base sheet, an uncured photoresist polymer, a mask sheet having light transparent regions, a light curing means, an acid, and a caustic. A continuous layer of uncured photoresist polymer is applied to one surface of the metal base sheet, the mask sheet is disposed between the uncured photoresist polymer and the light curing means, and the photoresist polymer is exposed through the mask means to cure the portions of the photoresist polymer in register with the transparent regions. The mask sheet is removed, the base sheet is exposed to acid for a sufficient time to define at least one protrusion, and the acid is washed away with the caustic. Photoresist polymer is then applied to the upper surface and side wall of the at least one protrusion, the base sheet is exposed to acid for a sufficient time to form additional side wall of the at least one protrusion such that the side wall defines a second height, the second height being greater than the first height, and the caustic is washed away.

As noted by the Office Action, Pozniak does not teach or suggest a step where photoresist polymer is further applied to the upper surface and sidewall of the at least one protrusion. Nor does Pozniak teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. Pozniak does not so much as recognize the problem

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addressed by Applicants' invention. Instead, Pozniak merely teaches a single etching step suitable for producing pattern plates for printing.

In fact, Pozniak teaches away from the use of a step where photoresist polymer is further applied to the upper surface and sidewall of at least one protrusion by disclosing that a single etching step is sufficient to produce the contemplated pattern plates. *See, e.g.*, col. 2, lines 24-29 ("Moreover, the etched pattern plates directly from conventional acid etching process are unexpectedly clean, i.e., free of unwanted metal in the non-imaged areas of the plates, and require less hand work to prepare them for use as pattern plates in printing."); Example 1 (After a single etching step, "[t]he resulting plate was suitable for subsequent use as [a] pattern plate in letterpress printing."); and Example 2 (After a single etching step, "[t]he resulting pattern plate was dimensionally stable and suited for subsequent use in letterpress printing.") As such, one of skill in the art would not be motivated to modify the invention of Pozniak by any further etching at all.

The combination of Pozniak with Yang is improper for several reasons. First, Yang teaches a method for lateral etching of a wall of a structure on a semiconductor substrate to form a notch or to release the structure. As such, Yang is not analogous to Pozniak, which is drawn to pattern plates for printing, nor to the problem addressed by Applicants' invention. Second, the Office Action provided no motivation to combine Pozniak with Yang and has instead relied on impermissible hindsight. Finally, the Office Action failed to provide evidence of a reasonable expectation of success.

The combination of Pozniak with Yang is improper on its face because the references are not analogous to each other, or to the problem addressed by Applicants' invention. *See, e.g.*, M.P.E.P. 2141.01(a) ("In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.") Applicants' invention is directed to an improved method for making a forming structure. Pozniak discloses pattern plates for printing. Yang discloses a method for lateral etching of a wall of a structure on a semiconductor substrate to form a notch, or to release the structure. Thus, Pozniak and Yang cannot properly be combined because a person of ordinary skill would not be motivated to look to a technique for forming a notch on, or releasing a structure from, a semiconductor substrate, or to pattern plates for letterpress printing when seeking to solve a problem of improving a forming structure.

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Regarding the motivation to combine Pozniak and Yang, the Office Action presents no objective evidence for a motivation to combine the two references and merely states that the motivation "is found in the knowledge generally available to one of ordinary skill in the art." (emphasis added). The Office Action's reliance on common knowledge is not sufficient to establish a *prima facie* case of obviousness in this instance. See, e.g., M.P.E.P. 2144.03 ("It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based.") and M.P.E.P. 2143.01 ("The level of skill in the art cannot be relied upon to provide the suggestion to combine references.")

The Office Action is required to provide evidence of a reasonable expectation of success in order to set forth a *prima facie* case of obviousness. M.P.E.P. 2142, *et. seq.* It has failed to do so in this instance. Applicants' have not found any evidence presented by the Office Action that the combination of Pozniak and Yang would successfully result in Applicants' invention where photoresist polymer is applied to the upper surface and sidewall of the at least one protrusion, or exposure of the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height.

Even assuming that Pozniak could be properly combined with Yang, the combination of references does not teach or suggest Applicants' invention. Pozniak in view of Yang does not teach or suggest a step where photoresist polymer is applied to the upper surface and sidewall of the at least one protrusion. Nor does the combination of Pozniak with Yang teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. As discussed above, Pozniak does not disclose or even suggest the desirability of additional etching steps. Yang, on the other hand, teaches lateral etching of a wall of a structure on a semiconductor substrate to form a notch or to release the structure, producing exactly the opposite structure as achieved by the claimed invention (Compare, e.g., Yang FIGS. 1C, 1D, 2C, 2D, and Applicants' Specification, at, e.g., page 3). Thus, if one were to combine Yang with Pozniak, one would achieve exactly what the claimed invention avoids, lateral undercutting.

Accordingly, Applicants submit that the Office Action has not set forth a *prima facie* case of obviousness and, furthermore, that there is no teaching or suggestion of the claim limitations of Claims 1, 2, or 5 from Pozniak in view of Yang. Therefore, Applicants respectfully request the withdrawal of the rejection of Claim 1, 2, and 5.

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Rejection Under 35 USC §103(a) Over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178) and further in view of Luthje et al. (US 20010021419)

Claim 3 has been rejected under 35 USC §103(a) as being unpatentable over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178) and further in view of Luthje et al. (US 20010021419). This rejection is traversed. Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness. Pozniak in view of Yang and Luthje does not teach or suggest all of the claim limitations of Claim 3, and, furthermore, there is no motivation to modify Pozniak by the teachings of Yang and Luthje.

As discussed above, the combination of Pozniak and Yang fails to render the claimed invention obvious because the combination fails to teach, suggest, or otherwise disclose Applicants' invention. For example, the combination fails to teach, suggest, or otherwise disclose a second etching step in the manner claimed. Nor does the combination of Pozniak and Yang teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. The addition of Luthje does not remedy the deficiency of Pozniak combined with Yang.

With respect to motivation to combine the references, the Office Action provided no motivation to combine Yang with Pozniak to render the claimed invention, as discussed above. The Office Action provided no motivation to further combine Luthje to achieve the present invention. Even assuming the references could be properly combined, the addition of Luthje does not remedy the deficiency of Pozniak and Yang. For example, the combination fails to teach, suggest, or otherwise disclose a second etching step in the manner claimed. Nor does the combination teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. Finally, Applicants have not found any evidence presented by the Office Action that the combination of Pozniak, Yang, and Luthje would successfully result in Applicants' invention.

Accordingly, Applicants submit that the cited references, singly or in combination, fail to disclose all the claim limitations of Claim 3 depends, and, further, that there is no motivation to modify the references to achieve the claimed invention. Therefore, the rejection of Claim 3 should be withdrawn.

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Rejection Under 35 USC §103(a) Over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178) and Luthje et al. (US 20010021419) and further in view of Ichinose (US Pat. No. 5,688,366)

Claim 4 has been rejected under 35 USC §103(a) as being unpatentable over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178) and Luthje et al. (US 20010021419) and further in view of Ichinose (US Pat. No. 5,688,366). This rejection is traversed. Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness. Pozniak in view of Yang, Luthje, and Ichinose does not teach or suggest all of the claim limitations of Claim 4, and, furthermore, there is no motivation to modify Pozniak by the teachings of Yang, Luthje, and Ichinose.

As discussed above, the combination of Pozniak, Yang, and Luthje fails to render the claimed invention obvious because the combination fails to teach, suggest, or otherwise disclose Applicants' invention. For example, the combination fails to teach, suggest, or otherwise disclose a second etching step in the manner claimed. Nor does the combination teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. The addition of Ichinose does not remedy the deficiency of Pozniak combined with Yang.

With respect to motivation to combine the references, the Office Action provided no motivation to combine Yang with Pozniak and Luthje to render the claimed invention, as discussed above. The Office Action provided no motivation to further combine Ichinose to achieve the present invention. Even assuming the references could be properly combined, the addition of Ichinose does not remedy the deficiency of Pozniak, Yang, and Luthje. For example, the combination fails to teach, suggest or otherwise disclose a second etching step in the manner claimed. Nor does the combination teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. Finally, Applicants have not found any evidence presented by the Office Action that the combination of Pozniak, Yang, Luthje, and Ichinose would successfully result in Applicants' invention.

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Accordingly, Applicants submit that the cited references, singly or in combination, fail to disclose all the claim limitations of Claim 4, and, further, that there is no motivation to modify the references to achieve the claimed invention. Therefore, the rejection of Claim 4 should be withdrawn.

Rejection Under 35 USC §103(a) Over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178) and further in view of Saksa et al. (US 20030185971)

Claim 6 has been rejected under 35 USC §103(a) as being unpatentable over Pozniak (US Pat. No. 4,136,615) in view of Yang et al (US 20040077178) and further in view of Saksa et al. (US 20030185971). This rejection is traversed. Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness. Pozniak in view of Yang and Saksa does not teach or suggest all of the claim limitations of Claim 6, and, furthermore, there is no motivation to modify Pozniak by the teachings of Yang and Saksa.

As discussed above, the combination of Pozniak and Yang fails to render the claimed invention obvious because the combination fails to teach, suggest, or otherwise disclose Applicants' invention. For example, the combination fails to teach, suggest, or otherwise disclose a second etching step in the manner claimed. Nor does the combination teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. The addition of Saksa does not remedy the deficiency of Pozniak combined with Yang and Luthje.

With respect to motivation to combine the references, the Office Action provided no motivation to combine Yang with Pozniak to render the claimed invention, as discussed above. The Office Action provided no motivation to further combine Saksa to achieve the present invention. Even assuming the references could be properly combined, the addition of Saksa does not remedy the deficiency of Pozniak and Yang. For example, the combination fails to teach, suggest or otherwise disclose a second etching step in the manner claimed. Nor does the combination teach or suggest exposing the base sheet to acid to form an additional side wall of the at least one protrusion such that the side wall defines a second height greater than the first height. Finally, Applicants have not found any evidence presented by the Office Action that the combination of Pozniak, Yang, and Saksa would successfully result in Applicants' invention.

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Accordingly, Applicants submit that the cited references, singly or in combination, fail to disclose all the claim limitations of Claim 6, and, further, that there is no motivation to modify the references to achieve the claimed invention. Therefore, the rejection of Claim 6 should be withdrawn.

Conclusion

This response represents an earnest effort to place the application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, reconsideration of this application and allowance of Claims 1-6 is respectfully requested.

Respectfully submitted,

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By 

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